

Bassovia Donnell-Smithii n. sp.—Said to be 24 dm. high, more or less softly pubescent or even hirsute, the upper parts of the stem and inflorescence glandular: leaves ample and thin, petioled, ovate to ovate-lanceolate, acuminate, from almost entire to sharply sinuate-toothed or lobed, 7.5 to 17.5 cm. long, minutely pubescent above, more conspicuously pubescent below, the midrib and principal veins usually prominently bordered by dense whitish pubescence: flowers on long pedicels in rather dense axillary umbellate clusters: the glandular calyx with small but evident teeth: corolla with ovate obtuse or acute glandular lobes 5 or 6 mm. long: anthers whitish-scarious along the lines of dehiscence: "fruit red".—Gautemala, Depart. Guatemala, alt. 5000 ft., February 1890 (F. D. S. 2270); Dueñas, Depart. Zacatepequez, alt. 5000 ft., April 1890 (F. D. S. 2258).

BASSOVIA MACROPHYLLA. — Pansamalá, Depart. Alta Verapaz, alt. 3800 ft., April 1889 (*Türckheim* 1438). This plant was at first considered to be a variety of the new *B. Mexicana* B. L. Robinson, of Pringle's distribution of 1890, and is so reported in Mr. Smith's "Enumeration", Part II. However, Mr. Robinson has since kindly looked into the matter, and the conclusion seems evident that it is the South American *Witheringia macrophylla*, a plant of puzzling synonymy. Bentham and Hooker refer it to *Bassovia*, and Miers to *Brachistus*. The disposition made of it by Bentham and Hooker seems to be the most natural one.

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New Grasses.

GEORGE VASEY.

The discovery of a second species of *Orcuttia* makes it necessary to somewhat modify the generic characters. They should now read as follows:

[Tribe FESTUCEÆ, sub-tribe *Seslerieæ*.] **Orcuttia**.—Panicke somewhat spicate, with short, simple, alternate, sessile spikelets, somewhat distant below, and crowded toward the summit: spikelets many flowered, compressed: empty and flowering glumes much alike, with many prominent straight nerves, strongly toothed or lobed at the apex: palea equaling

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its glume, narrow, thin, green on the strongly angled keels: anthers 3, styles 2, filaments and styles projecting beyond the apex.

Orcuttia Greenei n. sp. — Apparently annual, culms cespitose, many from one root, erect, finely pubescent, 8 to 10 inches high, with 8 or 10 nodes: sheaths shorter than internodes, loose, the lower ones particularly so, pubescent and striate: leaves erect, rigid, narrow, 1 to $1\frac{1}{2}$ inches long, pungently pointed, the upper sheathing the base of the panicle: panicle 2 to 3 inches long, somewhat flattened, of 10 to 15 contiguous spikelets: spikelets flattish, $\frac{1}{4}$ to $\frac{1}{2}$ inch long, of 5 to 15 flowers; empty glumes two-thirds as long as the flowering ones, all sparsely pubescent, green, oblong, with strongly toothed apex; flowering glumes 2 to $2\frac{1}{4}$ lines long, with about 5 sharp teeth at apex, folded excentrically; palet as long as its glume, narrow, strongly 2-keeled and hispid on the keels. — Collected on moist plains of the upper Sacramento, near Chico, California, June, 1890, by *Prof. E. L. Greene*.

Eragrostis spicata n. sp. — Culms perennial from strong rhizomes, erect, rigid, 3 to 4 feet high: leaves distant, rigid, erect, 10 to 15 inches long, involute toward the apex, sheaths longer than the internodes, ligule inconspicuous: panicle spike-like, very narrow, cylindrical, densely flowered, 10 to 15 inches long, tapering at top, branches closely appressed: spikelets about 3-flowered, 1 line long; empty glumes half as long, the upper broader, both obtuse or truncate, short ciliate on the keel; flowering glumes 3-nerved, short-falcate. — Collected at San Jose del Cabo, Lower California, by *T. S. Brandegee*, 1890.

Muhlenbergia Alamosæ n. sp. — Perennial, tufted: culms numerous, compressed or angled, erect, 2 to $2\frac{1}{2}$ feet high, wiry, rarely with 1 or 2 branches near the base, with about 6 nodes, the upper ones distant: lower cauline leaves erect, short, 2 to 3 inches long, the uppermost 8 to 10 inches long, equaling the panicle: panicle 4 to 5 inches long, 1 to 2 inches wide, open, the branches in threes or fives below, unequal, capillary, the lower third or half naked, the upper part 15 to 20-flowered, pedicels short, diverging: spikelets purple, over 1 line long; empty glumes ovate-acuminate or awl-pointed, half as long as the flowering glume, which is white barbed below on the margins and on the nerves of the palet; awns flex-

uose, 6 to 8 lines long.—Collected at Alamosa in Sonora by *Dr. Ed. Palmer*, 1890, no. 407.

Calamagrostis densus n. sp.—Culms in large patches, from strong rootstocks, 3 to 4 ft. high, robust, leafy, 5 to 6 nodes; the lower sheaths loose and longer than the internodes, the middle ones shorter than the internodes, the upper including the base of the panicle; leaves often a foot long, rigid, plane or becoming somewhat involute at the long slender points, somewhat scabrous, as are the sheaths; ligule 1 line long, lacerate: panicle strict, lance-oblong, 4 to 6 inches long, rachis slightly scabrous, branches somewhat verticillate, appressed, 1 inch long and densely flowered: spikelets crowded, 2 to $2\frac{1}{2}$ lines long; outer glumes linear-lanceolate, nearly equal, acute, slightly scabrous, margins slightly scarious; third (or flowering) glume a little shorter, narrow, apex slightly toothed and mucronate, a few short hairs at the base; awn, twisted near the base, a little longer than its glume; palea a little shorter than the glume, thin; sterile tuft, slender, one-third to one-half as long as the glumes, with few hairs.—Collected near Julian, San Diego co., California, by *C. R. Orcutt*.

Calamagrostis kœlerioides n. sp.—Culms erect, 2 feet high, rather rigid, smooth: leaves 2 to 6 inches long, narrow, somewhat scabrous, ligule conspicuous, laciniate, blade rigid, pointed, the upper very short: panicle spike-like, narrow, 3 to 4 inches long, the branches in short, approximate (or at the base rather distant) clusters: spikelets about 2 lines long, linear-lanceolate, rather smaller, but otherwise much as in *Calamagrostis densus*; the panicle having much the appearance of *Kœleria cristata*.—Collected near Julian, San Diego co., California, by *C. R. Orcutt*.

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BRIEFER ARTICLES.

Simple mechanism to show geotropism.—Take the works of an old clock run by a weight rather than a spring and support them horizontally, i. e. with the shafts vertical. The weight is to be carried over a pulley outside the works and the pendulum is to be removed so that the wheels may be made to revolve at a much more rapid rate than in the clock. One of the shafts, that bearing the scape wheel, is longer